What is claimed is:

1. An antenna array comprising:
   a plurality of facets disposed around an axis, each of said plurality of facets having sides connectively abutting the sides of an adjacent facet, said plurality of facets forming a faceted tube;
   at least one patch antenna disposed on each of said plurality of facets;
   at least one radio frequency interface module disposed therein;
   a plurality of signal tracks disposed across said plurality of facets interconnecting said patch antennas across said connectively abutting sides to said radio frequency interface module;
   at least one ground plane, separated from said at least one patch antenna and said plurality of signal tracks by a dielectric having a thickness; and
   each facet having a substantially planar region thereunder said at least one patch antenna, and each facet having a first curved region under at least a portion of said plurality of signal tracks, wherein said first curved region has a radius of curvature great enough to avoid discontinuities in RF propagation along said signal tracks.

2. The antenna array of claim 1 wherein said first curved region has a radius of curvature in excess of ten times the dielectric thickness.

3. The antenna array of claim 1 wherein each facet has a second curved region under at least a portion of said plurality of signal tracks from a side of said substantially planar region opposite to the side of said first curved region to the abutting side of an adjacent facet of said plurality of facets, wherein said second curved region has a radius of curvature great enough to avoid discontinuities in RF propagation along said signal tracks.

4. The antenna array of claim 3 wherein said second curved region has a radius of curvature in excess of ten times the dielectric thickness.

5. The antenna array of claim 4 wherein said first curved region has a radius of curvature in excess of ten times the dielectric thickness.

6. The antenna array of claim 1 wherein at least one of said substantially planar region of at least one of said plurality of facets is disposed off-center of a center line of the facet.

7. The antenna array of claim 1 wherein the at least one radio frequency interface module is disposed across an inside corner formed at the connectively abutting sides of two adjacent facets of said plurality of facets.

8. The antenna array of claim 1 wherein the number of facets is six.

9. The antenna array of claim 1 wherein the number of facets is eight.

10. A method for forming an antenna array, the method comprising:

disposing a plurality of facets around an axis, each of said plurality of facets having sides abutting the sides of an adjacent facet, said plurality of facets forming a faceted tube;

disposing at least one patch antenna on each of said plurality of facets;

disposing at least one radio frequency interface module within said array;

disposing a plurality of signal tracks across said plurality of facets interconnecting said patch antennas across said connectively abutting sides to said radio frequency interface module;

disposing at least one ground plane separated from the at least one patch antenna and plurality of signalling tracks by a dielectric having a thickness; and

configuring each facet to have a substantially planar region under said at least one patch antenna, and each facet to have a first curved region under at least a portion of said plurality of signal tracks, wherein said first curved region has a radius of curvature great enough to avoid discontinuities in RF propagation along said signal tracks.

11. The method of claim 10 wherein said first curved region has a radius of curvature in excess of ten times the dielectric thickness.

12. The method of claim 10 wherein said configuring step further comprises each facet has a second curved region under at least a portion of said plurality of signal tracks from a side of said substantially planar region opposite to the side of said first curved region to the abutting side of an adjacent facet of said plurality of facets, wherein said second curved region has a radius of curvature great enough to avoid discontinuities in RF propagation along said signal tracks.

13. The method of claim 12 wherein said second curved region has a radius of curvature in excess of ten times the dielectric thickness.

14. The method of claim 13 wherein said first curved region has a radius of curvature in excess of ten times the dielectric thickness.

15. The method of claim 10 wherein said configuring step further comprises at least one of said substantially planar region of at least one of said plurality of facets is disposed off-center of a center line of the facet.

16. The method of claim 10 wherein the step of disposing at least one radio frequency interface module within said array further comprises disposing the least one radio frequency interface module across an inside corner formed at the abutting sides of two adjacent facets of said plurality of facets.

17. The method of claim 10 wherein the quantity of said plurality of facets is six.

18. The method of claim 10 wherein the quantity of said plurality of facets is eight.